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Abstract

The present invention relates to an ultrasonic transducer, in particular, for use as a transmitter and a receiver in pulse-echo applications, in particular in the motor vehicle sector to object detection inside the interior of vehicles, for example to control the triggering of an air bag triggering during an accident.

The invented ultrasonic transducer is provided with a membrane having a piezoelectric disk disposed on its rear side. The diameter of the piezoelectric disk is between 60% and 85% of the diameter of the membrane. A substance of open-cell, soft material is foamed onto the main surface of said rear side of the membrane. Foaming on this substance can yield especially advantageous transducer properties with regard to sensitivity and mechanical quality Q. If the substance is foamed on, the described relationship between the diameter of the piezoceramic and the diameter of the membrane results in a large sound emission aperture angle.